

INTERNATIONAL SEARCH REPORT

International Application No
PCT/U S2004/041392

A CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L33/00

According to International Patent Classification (IPC) or to both national classification and IPC

B FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 HOIL

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate of the relevant passages	Relevant to claim No
X	US 6 184 544 B1 (TODA HIDEKAZU ET AL) 6 February 2001 (2001-02-06)	1, 2, 15-20, 29-31
Y	the whole document -----	21-28
X	US 6 093 940 A (ISHINAGA ET AL) 25 July 2000 (2000-07-25)	1-4, 7, 9-11, 15-20, 29, 31
Y	the whole document	8, 12-14
X	WO 03/098709 A (ROHM CO., LTD; ISOKAWA SHINJI) 27 November 2003 (2003-11-27)	1-6, 15-20, 29, 31
Y	the whole document & EP 1 528 602 A (ROHM CO., LTD) 4 May 2005 (2005-05-04) -----	13, 14
	- / "	

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex

* Special categories of cited documents

- 'A' document defining the general state of the art which is not considered to be of particular relevance
- 'E' earlier document but published on or after the international filing date
- 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- 'O' document referring to an oral disclosure, use, exhibition or other means
- 'P' document published prior to the international filing date but later than the priority date claimed

T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

'X' document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

'&' document member of the same patent family

Date of the actual completion of the international search

25 May 2005

Date of mailing of the international search report

U 09 2005

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International Application No

PCT/US2004/041392

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/189236 A1 (ARNDT KARLHEINZ) 9 October 2003 (2003-10-09)	1-4,7,9, 15-20, 29,31
Y	the whole document -----	13,14
Y	US 6 392 778 B1 (PERDUIJN ARMAND B ET AL) 21 May 2002 (2002-05-21) abstract	21-28
Y	US 5 914 501 A (ANTLE ET AL) 22 June 1999 (1999-06-22) the whole document -----	12-14
Y	US 6 516 516 B1 (LEE BYEONG-DUCK) 11 February 2003 (2003-02-11)	8
A	the whole document -----	1-31
A	WO 98/20718 A (SILICONIX INCORPORATED) 14 May 1998 (1998-05-14) the whole document -----	1-31

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2004/041392

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons

- 1 ☐ Claims Nos
because they relate to subject matter not required to be searched by this Authority, namely
- 2 ☐ Claims Nos
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out specifically
- 3 ☐ Claims Nos
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows

see additional sheet

- 1 ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant this International Search Report covers only those claims for which fees were paid, specifically claims Nos
- 4 ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims, it is covered by claims Nos

1-31

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest
- ☐ No protest accompanied the payment of additional search fees

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-31

A light emitting package comprising a chip carrier, a light emitting chip attached to the top surface of the chip carrier, and a lead frame attached to the top surface of the chip carrier.

2. claims: 32-37

A light emitter comprising a chip carrier, a light emitting chip attached to the top surface of the chip carrier, a lead frame electrically contacting electrodes of the light emitting chip, and a support with printed circuitry, the lead frame electrically contacting the printed circuitry, and the chip carrier secured to the support without the lead frame intervening therebetween.

INTERNATIONAL SEARCH REPORT

Information on patent family members

InterfWonal Application No

PCT/US2004/041392

Patent document cited in search report		Publication date		Patent family member(s)		Publication data
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